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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/673,826

09/29/2003

John Voellmicke

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27777

7590

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EXAMINER

RAMANA, ANURADHA

ART UNIT

PAPER NUMBER

3733

DATE MAILED: 10/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/673,826	VOELLMICKE, JOHN	
	Examiner	Art Unit	
	Anu Ramana	3733	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2006.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3, 5-14, 16-29, 31 and 32 is/are pending in the application.
- 4a) Of the above claim(s) 19, 20, 28, 29, 31 and 32 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3, 5-14, 16-18 and 21-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>5/31/2005</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the features of claims 24-26 must be shown or the features canceled from the claims. No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-14, 16-18 and 21-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatnagar et al. (US 2002/0049449A1) in view of Matukas (US 4,645,488).

Bhatnagar et al. disclose a syringe system or device for injecting bone cement including: a flexible delivery tube 44; a cannula 12; and a syringe or "delivery tube" 42 wherein the movement of the plunger within the delivery tube can be automated by attachment to an electromechanical or pneumomechanical servo system or "advancement means" (paras [0042]-[0045]).

Bhatnagar et al. disclose all elements of the claimed invention except for a syringe having flexible walls.

Matukas teaches a flexible syringe 10 with a flexible piston or plunger to reduce the frictional resistance between the material and the wall of the syringe or delivery tube (col. 2, lines 48-68, col. 3, lines 1-62 and col. 4, lines 15-26).

Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a flexible syringe or delivery tube with a flexible plunger, as taught by Matukas, in the Bhatnagar et al. system, to reduce the frictional resistance between the material and the wall of the syringe or delivery tube.

Regarding claim 3, although the combination of Bhatnagar et al. and Matukas does not disclose the syringe barrel being made of PEEK, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the syringe of PEEK, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416. See US 7,011,649 (col. 3, lines 38-54).

Regarding claims 5 and 9-14, although the combination of Bhatnagar et al. and Matukas do not disclose the claimed ranges, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have constructed the device of the combination of Bhatnagar et al. and Matukas with the claimed ranges of dimensions, since it has been held that where the general conditions of a claim are

disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Regarding claims 16 and 17, it is very well known to store bone cement at cold temperature to increase its shelf life. Thus, prior to use, the syringe would be filled from bone cement stored at a cold temperature. Although the combination of Bhatnagar et al. and Matukas does not disclose the claimed ranges of temperatures, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have filled the delivery tube in the device of the combination of Bhatnagar et al. and Matukas with bone cement having the claimed temperatures, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. In re Aller, 105 USPQ 233.

Claims 24-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bhatnagar et al. (US 2002/0049449A1) and Matukas (US 4,645,488) further in view of Sams (US 4,865,591).

The combination of Bhatnagar et al. and Matukas discloses all elements of the claimed invention except for: (1) the plunger having ratchet teeth or a textured surface; (2) a pawl adapted to compliment the ratchet teeth of the plunger; and (3) a hand-held gun.

Sams teaches providing ratchet teeth on the plunger of a syringe and a complementary pawl in a hand-held gun to dispense fluid from the syringe (Figs. 2 and 3, col. 4, lines 59-68 and col. 5, lines 1-28).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided ratchet teeth on the plunger in the device of the combination of Bhatnagar et al. and Matukas, as taught by Sams, to dispense accurately controlled but variable doses of fluid.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anu Ramana whose telephone number is (571) 272-4718. The examiner can normally be reached Monday through Friday between 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eduardo Robert can be reached at (571) 272-4719. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3733

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AR

September 22, 2006

Annadha Ramana


EDUARDO C. ROBERT
SUPERVISORY PATENT EXAMINER